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Repetophragma elegans sp. nov. from Hainan Province, China

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Abstract—A new species, *Repetophragma elegans*, is described and illustrated from specimens collected on dead branches in Hainan Province, China. The fungus is characterized by subcylindrical to subfusiform 14–18-euseptate brown conidia with rounded apices, apical mucilaginous tunica, and truncate bases.

Key words—conidial fungi, taxonomy

Introduction

During our ongoing survey of microfungi associated with woody debris in tropical forests of Hainan Province, China, an undescribed species with the morphological characteristics of the genus *Repetophragma* Subram. was collected on the dead stems of an unidentified broadleaf tree.

Materials & methods

Collected samples of woody debris were placed in separate zip-lock plastic bags, taken to the laboratory, and incubated at 27°C for more than 2 weeks in an artificial climate box in 9-cm-diam. plastic Petri dishes containing moistened filter paper. Samples were examined under an Olympus SZ61 dissecting microscope. At least 50 mature conidia and 30 conidiophores were mounted in lactophenol, measured at 600× and 1000× magnifications, and photographed with an Olympus BX53 microscope. Adobe

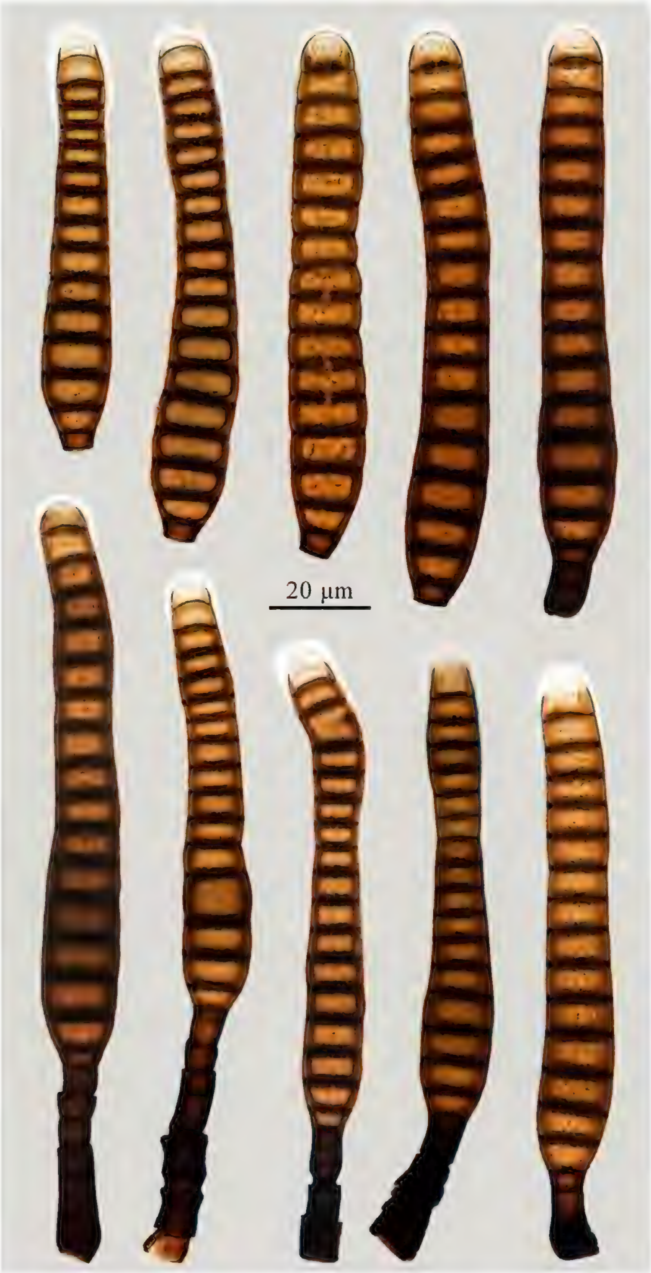

Fig. 1. *Repetophragma elegans* (holotype, HSAUP H6478). Conidiophores, conidiogenous cells, and conidia.

Photoshop 7.0 was used to prepare the photographic images, and the backgrounds were replaced for esthetic reasons. Type specimens were deposited in the Herbarium of Department of Plant Pathology, Shandong Agricultural University, Taian, China (HSAUP) and the Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China (HMAS).

Taxonomy

Repetophragma elegans J.W. Xia & X.G. Zhang, **sp. nov.** FIG. 1

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Differs from *Repetophragma calongei* by its wider conidia, with an apical mucilaginous tunica.

TYPE: China, Hainan Province, Diaoluo Mountain, on dead stems of an unidentified broadleaf tree, 10 Apr. 2014, J.W. Xia (**Holotype**, HSAUP H6478; **isotype**, HMAS 245642).

ETYMOLOGY: *elegans*, referring to elegant, describing the conidia.

COLONIES on natural substrate effuse, brown to dark brown, hairy. Mycelium partly superficial, partly immersed in the substrate, composed of septate, pale brown, smooth, 2–4 µm diam. hyphae. CONIDIOPHORES macronematous, mononematous, unbranched, erect, straight to slightly flexuous, cylindrical, smooth, thick-walled, brown to dark brown, up to 5-septate, 13.5–50 × 6.5–9.5 µm. CONIDIOGENOUS CELLS monoblastic, terminal, indeterminate, brown to dark brown, cylindrical, with 1–5 annellidic percurrent extensions, 6–13.5 × 6–7 µm. Conidial secession schizolytic. CONIDIA solitary, straight or slightly curved, subcylindrical to subfusiform, smooth-walled, brown to dark brown, 14–18-euseptate, 75–115 × 12.5–15.5 µm (excluding mucilage), apex rounded, with an apical mucilaginous tunica, truncate at the base, 6–7 µm diam.

COMMENTS—*Repetophragma* was introduced by Subramanian (1992) to accommodate *Sporidesmium*-like species that produced conidiogenous cells with annellidic percurrent extensions and euseptate conidia. Castañeda-Ruiz et al. (2011) redisposed taxa in *Repetophragma*. According to Index Fungorum (2017) a total of 35 species are included in *Repetophragma*.

Repetophragma elegans is morphologically similar to *R. calongei* J. Mena et al. in conidial shape. However, *R. calongei* can be easily separated by its narrower conidia (8–10.5 µm) without an apical mucilaginous tunica (Silvera-Simón et al. 2009).

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